

Anhydrous Ammonia Fertilizer vs. Liquid (28%) Fertilizer (Two rates of each)-Corn

Mick Minchow

Private Industry Cooperator: Mike Williams

OBJECTIVE: To determine and document the profitability of anhydrous ammonia fertilizer versus Liquid (28 %) fertilizer at two application rates.

HIGH RATE

Treatment:

Fertilize: 110 pounds/acre liquid (28 %) nitrogen Starter 10-34-o at 57 pounds/acre (April 27) and anhydrous ammonia at 110 pounds/acre (April 10)
(All nitrogen rates are actual.)

Herbicide: 2.4 quarts Bicep, .76 ounces Beacon, 1 pint Buctril and 1 pint Roundup

Plant

Harvest

LOW RATE

Treatment:

Fertilize: 60 pounds/acre liquid (28%) nitrogen Starter 10-34-o at 57 pounds/acre (April 27) and anhydrous ammonia at 60 pounds/acre (April 10)
(All nitrogen rates are actual.)

Herbicide: 2.4 quarts Bicep, .76 ounces Beacon, 1 pint Buctril and 1 pint Roundup

Plant

Harvest

Comparative cost (per acre)

	<u>1994</u> <u>Liquid</u>	<u>Anhydrous</u> <u>Ammonia</u>
Fertilizer	\$17.69	\$13.74
Anhydrous Rig	\$ 0.00	\$ 6.00
Liquid Sprayer	\$ 3.50	\$ 0.00
Total	\$21.19	\$19.74

Comparative cost (per acre)

	<u>1994</u> <u>Liquid</u>	<u>Anhydrous</u> <u>Ammonia</u>
Fertilizer	\$ 9.63	\$ 7.50
Anhydrous Rig	\$ 0.00	\$ 6.00
Liquid Sprayer	\$ 3.50	\$ 0.00
Total	\$13.13	\$13.50

**Anhydrous Ammonia Fertilizer vs. Liquid (28%) Fertilizer at Two rates—
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VARIABLE	1994 CORN
Moisture (%)	
High Anhydrous Ammonia	16.2
High Liquid (28%)	16.2
Low Anhydrous Ammonia	16.4
Low Liquid (28%)	16.0
Test weight (pounds/bushel)	
High Anhydrous Ammonia	59.0
High Liquid (28%)	58.8
Low Anhydrous Ammonia	58.6
Low Liquid (28%)	58.5
Yield (15.5%) (bushels/acre)	
High Anhydrous Ammonia	151
High Liquid (28%)	143
Low Anhydrous Ammonia	142
Low Liquid (28%)	137
Mean Anhydrous Ammonia	147 **
Mean Liquid (28%)	140
Mean High Rate	147 **
Mean Low Rate	139

****** source significantly different at 95% confidence level

****** rate significantly different at 95% confidence level

Summary: The anhydrous ammonia fertilizer treatments yielded significantly higher than the liquid (28%) fertilizer treatments. High rate treatments of both fertilizer sources also produced significantly higher yields than low-rate treatments.